

REMARKS

The Office Action

Claims 31-49 are pending. Claims 31-41 and 49 stand rejected for obviousness over Kornena et al. (RU 2099974; hereafter “Kornena”) in view of GB 1,171,068 (hereafter “GB ‘068”). Claims 42-44 and 47-48 stand rejected for obviousness over Kornena and D’Agostino et al. (WO 99/07231; hereafter “D’Agostino”). Claims 44-46 stand rejected for obviousness over Kornena and Southwick et al. (U.S. Patent No. 5,985,979; hereafter “Southwick”)

Amendments to the Claims

Claim 31 has been amended to include the magnetic field strength previously recited in claim 35 and by removing milk from the list of pre-mix to be emulsified according the method of this invention. Claims 35 and 49 have also been cancelled.

Rejections under 35 U.S.C. § 103

Claim 31, from which all other claims depend, stands rejected over Kornena in view of GB ‘068. The claims are directed to an emulsification method including flowing, conducting or circulating a pre-mix of two or more immiscible liquids through one or more magnetic fields under conditions to emulsify the pre-mix. As is noted in the specification, “[t]here seems to be a threshold flow rate below which there is little or no improvement in the stability of the pre-mixture. The gain in emulsion stability increases with the said linear flow rate[,]” and “below the threshold flow rate mentioned hereinabove, raising the number of re-circulation times does not help to improve the stability of the emulsion...” Thus, the flowing, conducting, and circulating feature of the present claims is critical to the success of the instant methods, and these features are not taught or suggested by the art, nor are they the result of routine optimization of general working conditions.

According to the Office, Kornena teaches all of the limitations of claim 31 except the flowing, conducting, or circulating of the pre-mix and the linear flow rate of the mixture. The Office then relies on GB ‘068 to teach or suggest these limitations, relying on the reasoning of *In re Aller*. Applicants traverse this rejection.

Kornena teaches a method for producing mayonnaise by creating an emulsion of two immiscible liquids. As noted by the Office, Kornena does not contemplate flow of any kind, much less the minimum flow rate required by the present claims. GB ‘068 teaches a method for treating a dispersion, such as beer or milk, to pasteurize, sterilize, or stabilize it. As is well-known in the art, beer is not an emulsion, and, while the reference mentions milk (an emulsion), the reference is silent with respect to any need to emulsify it. Thus, Kornena and GB ‘068 are directed to unrelated uses, and there is no reason why one skilled in the art would look to GB ‘068 to make improvements to the process described in Kornena.

Moreover, the method of GB ‘068 results in the coagulation and precipitation of components of the liquid, rather than mixing as required by the present claims. For example, the reference states: “Dispersoids dissolved in the beer or other liquids are precipitated, which effectively eliminates any subsequent clouding. As a result, the liquids are stabilised with respect to colloids and bacteria...” (page 1, line 82 – page 2, line 4) Furthermore, “[t]he combined magnetic and d.c. fields acting successively on the liquids treated produce an anionic or cationic charge in the amphoteric particles in the liquids. The resulting coagulates formed in the liquid may be removed...” (page 3, lines 123-128).

As noted in the present specification: “emulsions are in general thermodynamically unstable[,] and thus after some time a phase separation occurs which may be induced, for example, by droplet sedimentation or coagulation.” (page 2, line 30 – page, line 1) Sedimentation and coagulation are therefore known problems in the production of emulsions, and one skilled in the art would not look to GB ‘068, which describes methods resulting in precipitation and coagulation, to modify any emulsification method.

Applicants acknowledge that *In re Aller* held that “[w]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” (M.P.E.P. § 2144.05). This decision is, however, not relevant to the present claims. First, as noted in M.P.E.P. § 2144.05, *In re Aller* is applicable only when the variable to be optimized is art recognized as being result-effective. Here, Kornena does not employ flow. GB ‘068 is not directed to an emulsification procedure, as claimed, and the parameters employed in the reference are therefore irrelevant. Moreover, in commenting on GB ‘068, the Office has credited the reference with far more than it teaches. The Office states:

“The number of recirculation, linear flow rate of the liquids and the residence time through the magnetic field all contribute to the total energy supplied to the emulsion and then the size reduction of the micelles.” This reasoning, however, is based on Applicants’ specification, as GB ‘068 does not discuss the size of micelles in any context, much less the parameters to be varied to achieve a particular result. Thus, the art of record does not identify that flow is a result-effective variable for emulsification, and *In re Aller* cannot be the basis of an obviousness rejection.

The rejection should be withdrawn.

The Office has also rejected claims 42-43 and 47-48 for obviousness over Kornena and D’Agostino and claims 44-46 for obviousness over Kornena and Southwick. These claims depend from and therefore include all limitations of claim 31. The Office has acknowledged that Kornena does not teach or suggest the limitations of claim 31, as discussed above. Furthermore, the Office does not allege that D’Agostino teaches or suggests any process for emulsification or that Southwick teaches or suggests the use of flow in emulsification. Thus, Applicants assume that the Office intended to reject the claims over the combination of Kornena, GB ‘068, and D’Agostino or Southwick. As noted above, the combination of Kornena and GB ‘068 does not render claim 31 obvious. Any purported teachings or suggestions of D’Agostino or Southwick on limitations of the dependent claims do not remedy this deficiency, and it is unnecessary to address the references further at this time. This basis of the rejection should also be withdrawn.

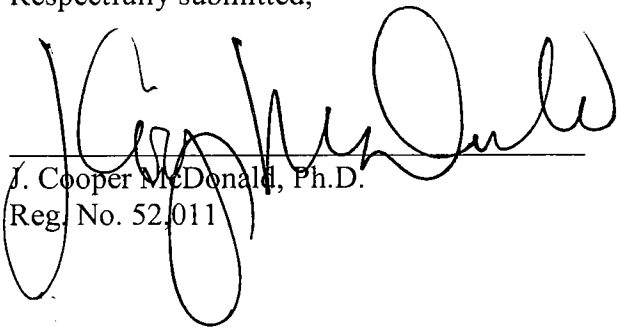
CONCLUSION

Applicants submit that the claims are in condition for allowance, and such action is respectfully requested. Enclosed is a petition to extend the period for reply for three months. If there are any additional charges or any credits, please apply them to Deposit Account No. 03-2095.

Respectfully submitted,

Date: _____

2/12/09



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